USCMS Engineer Status Report for May 2003

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1 Work Performed This Month

I continued the development of the simulation and modeling framework for the distributed computing models. A set of complex testes were performed with the new engine. It is able to handle correctly large number of threads (more 10 000 on solaris, 5000 on linux and windows). Tests for theoretical queuing theory problems were performed to make sure that the time dependencies are correctly handled in the system. We developed the basic components we need (Database servers, File Servers, CPU, network elements: links, routers, basic jobs). A flexible mechanism to provide output for the simulation, including graphics has been added. We are now working to test the basic components and to build realistic examples for the current farms used in production system.

For the MonaLISA development we deployed the new system having a mechanism to automatically update MonaLisa services. This is based on sending an event to all the discovered JINI services using a SSL connection. Only trusted developers for each service can generate such a signal. When a running service receives such a signal, it stops the data acquisition part and starts to download the new version from a specified URL. The distribution must be digitally signed and with a trusted certificate for the service. When this operation complete successfully the service restarts itself. When a service is stated, it will first check for new versions with a defined set of URLs. If a new version is found, it will perform the steps mentioned before. In this way it is possible to update all service running on many sites (or those which are not running but will be started later) easily and in a secure way. This automatic update is working well now and it is used for all the deployed services.

We interfaced MonALISA with the IEPM-BW measurement system developed at SLAC and it is used now at 3 sides (Internet2, Gatech, SLAC)

We interface MonaLISA with PBS and it used now at Caltech. The LSF interface is used at CERN.

2 Links To Supporting Documentation

- Monarc Simulation framework http://monalisa.cacr.caltech.edu/MONARC/
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- MonaLisa web page http://monalisa.cacr.caltech.edu
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- CMS IGT production repository http://monalisa.cacr.caltech.edu:8080/